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Clerk, U.S. Courts
District Of Montana
Missoula Division

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MONTANA
MISSOULA DIVISION**

CROW INDIAN TRIBE; et al.,

Plaintiffs,

vs.

UNITED STATES OF AMERICA; et al.,

Federal Defendants.

and

STATE OF WYOMING; et al.,

Defendant-Intervenors.

CV 17-89-M-DLC

(Consolidated with Case Nos.

CV 17-117-M-DLC,

CV 17-118-M-DLC,

CV 17-119-M-DLC,

CV 17-123-M-DLC

and CV 18-16-M-DLC)

ORDER

In this Order, the Court vacates the June 30, 2017 Final Rule of the United States Fish and Wildlife Service delisting the Greater Yellowstone Ecosystem population of grizzly bears, and restores Endangered Species Act status to the Greater Yellowstone grizzly.

The Court is aware of the high level of public interest in this case, as well as the strong feelings the grizzly bear evokes in individuals, from ranchers and big-game hunters to conservationists and animal rights activists. The policy

implications of the Greater Yellowstone grizzly delisting are significant, but they cannot affect the Court's disposition. Although this Order may have impacts throughout grizzly country and beyond, this case is not about the ethics of hunting, and it is not about solving human- or livestock-grizzly conflicts as a practical or philosophical matter. These issues are not before the Court. This Court's review, constrained by the Constitution and the laws enacted by Congress, is limited to answering a yes-or-no question: Did the United States Fish and Wildlife Service (hereinafter "Service") exceed its legal authority when it delisted the Greater Yellowstone grizzly bear?

Fully briefed and at issue here,¹ the Plaintiffs challenge the delisting decision under the Endangered Species Act ("ESA") and Administrative Procedure Act ("APA") on two primary grounds²: (1) the Service erred in delisting the Greater Yellowstone Ecosystem grizzly bear without further consideration of the impact on other members of the lower-48 grizzly designation; and (2) the Service acted arbitrarily and capriciously in its application of the five-factor threats

¹ As an effort to resolve the present claims prior to a fall hunting season, on May 14, 2018, the Court bifurcated and stayed proceedings on all claims other than those brought under the Administrative Procedure Act and Endangered Species Act. Thus, the present Order does not address Plaintiff Aland's Claims 2, 4, and 8 or Plaintiffs Crow Indian Tribe, et al.'s Religious Freedom Restoration Act claim.

² The Court does not reach the Plaintiffs' other arguments, as it finds the listed arguments dispositive.

analysis demanded by the ESA.

The Court finds for the Plaintiffs on both grounds. By delisting the Greater Yellowstone grizzly without analyzing how delisting would affect the remaining members of the lower-48 grizzly designation, the Service failed to consider how reduced protections in the Greater Yellowstone Ecosystem would impact the other grizzly populations. Thus, the Service “entirely failed to consider an important aspect of the problem.” *Motor Vehicle Mfrs. Ass’n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983).

Further, the Service’s application of the ESA threats analysis is arbitrary and capricious for at least two reasons. First, by dropping a key commitment—the commitment to ensure that any population estimator adopted in the future is calibrated to the estimator used to justify delisting—the Service illegally negotiated away its obligation to apply the best available science in order to reach an accommodation with the states of Wyoming, Idaho, and Montana. Second, the Service relied on two studies to support its determination that the Greater Yellowstone grizzly can remain independent and genetically self-sufficient. However, the Service’s reliance is illogical, as both studies conclude that the long-term health of the Greater Yellowstone grizzly depends on the introduction of new genetic material.

BACKGROUND

I. The Listing of the Lower-48 Grizzly Bear

Prior to European settlement, grizzly bears, *Ursus arctos horribilis*, ranged throughout western North America, from central Mexico to Alaska. Final Rule: Endangered and Threatened Wildlife & Plants; Removing the Greater Yellowstone Ecosystem Population of Grizzly Bears from the Federal List of Endangered & Threatened Wildlife, 82 Fed Reg. 30,502, 30,508 (June 30, 2017) [hereinafter Final Rule]. In the lower 48 states alone, an estimated 50,000 grizzlies roamed, occupying terrain far from the mountain climates with which they are currently associated. *Id.* Grizzly bears are the ultimate opportunists, with diets varying significantly between individual bears, seasons, years, and location. *Id.* at 30,505. “The ability to use whatever food resources are available is one reason grizzly bears are the most widely distributed bear species in the world, occupying habitats from deserts to alpine mountains and everything in between.” *Id.*

The fate of the grizzly bear changed dramatically around the turn of the 19th Century, as European settlers moved west. The government implemented “bounty programs aimed at eradication, [and] grizzly bears were shot, poisoned, and trapped wherever they were found.” *Id.* at 30,508. By the 1930s—just 125 years after European settlers moved into grizzly country—grizzly bears were found in

only two percent of their former range. *Id.* Nor did this mark the low point for the grizzly. While 37 separate grizzly populations were identified in the contiguous United States in 1922, only six populations remained in 1975. The Greater Yellowstone Ecosystem, covering portions of Wyoming, Montana, and Idaho, was home to one of the largest of those populations. In 1975, the total number of bears in the Greater Yellowstone Ecosystem was estimated at 136 to 312 individuals. *Id.*

The lower-48 grizzly bear was listed as threatened in 1975, only two years after Congress passed the ESA. Amendment Listing the Grizzly Bear of the 48 Coterminous States as a Threatened Species, 40 Fed. Reg. 31,734 (July 28, 1975). Indeed, as the Supreme Court recognized in *Tennessee Valley v. Hill*, Congress passed the ESA in part because it wanted to force the agencies' hand, particularly in regard to the grizzly bear. 437 U.S. 153, 183–84 (1978) (quoting 119 Cong. Rec. 42,913 (1973)) (“[T]he continental population of grizzly bears . . . may or may not be endangered, but . . . is surely threatened Once this bill is enacted, . . . [t]he agencies of Government can no longer plead that they can do nothing about it. *They can, and they must. The law is clear.*”). “The plain intent of Congress in enacting [the ESA] was to halt and reverse the trend toward species extinction, whatever the cost.” *Id.* at 184.

II. The Current Status of the Grizzly Bear

Since 1982, the Service has focused on fostering recovery in six ecosystems within the lower-48 states: (1) the Greater Yellowstone Ecosystem, covering portions of Wyoming, Montana, and Idaho; (2) the Northern Continental Divide Ecosystem of north-central Montana, (3) the Cabinet-Yaak area extending from northwest Montana to northern Idaho; (4) the Selkirk Mountains in northern Idaho, northeast Washington, and southeast British Columbia; (5) north-central Washington's North Cascades area; and (6) the Bitterroot Mountains of western Montana and central Idaho. Final Rule, 82 Fed. Reg. at 30,508–09. A substantial population of grizzly bears is found in only two of the six ecosystems—the Greater Yellowstone region with an estimated 700-plus bears, and the Northern Continental region with an estimated 900-plus bears. *Id.* 48 bears are estimated to reside in the Cabinet-Yaak, and there are an estimated 88 bears in the Selkirks. *Id.* The last documented sighting in the North Cascades was in 1996, and the Service estimates its population at fewer than 20 bears. *Id.* No bears are known to inhabit the Bitterroots. *Id.*

The six ecosystems are geographically isolated from one another, and there is no evidence of interbreeding. The Greater Yellowstone population's closest geographic neighbor is located in the Northern Continental Divide Ecosystem,

approximately 70 miles to the north and located on the other side of Interstate 90. *Id.* at 30,518. “[T]here is currently no known connectivity between these two grizzly populations.” *Id.* Further, “[n]o grizzly bears originating from the [Greater Yellowstone Ecosystem] have been suspected or confirmed beyond the borders of the [Greater Yellowstone] grizzly bear [distinct population segment] Similarly, no grizzly bears originating from other ecosystems have been detected inside the borders of the [Greater Yellowstone] grizzly bear [distinct population segment].” *Id.* at 30,517–18.

The density and growth of the grizzly bear has proven difficult to estimate. *Id.* at 30,506. It takes at least six years of monitoring data and as many as 30 females with radio collars to accurately estimate average annual population growth. *Id.* “Grizzly bears have one of the slowest reproductive rates among terrestrial mammals, resulting primarily from . . . : [l]ate age of first reproduction, small average litter size, and the long interval between litters.” Proposed Rule: Endangered and Threatened Wildlife & Plants; Removing the Greater Yellowstone Ecosystem Population of Grizzly Bears from the Federal List of Endangered & Threatened Wildlife, 81 Fed. Reg. 13,174, 13,177 (March 11, 2016). On average, a female grizzly first reproduces at the age of six and produces a litter every 2.78 years through her mid- to late-20s. *Id.* “Given [these] factors, it may take a

female grizzly bear 10 or more years to replace herself in a population.” *Id.*

III. Procedural background

In 2007, the Service published its first final rule designating the Greater Yellowstone grizzly as a distinct population segment and delisting it. 72 Fed. Reg. 14,866 (Mar. 29, 2007). Shortly after, a conservation group challenged the rule on several grounds. *Greater Yellowstone Coalition, Inc. v. Servheen*, 672 F. Supp. 2d 1105 (D. Mont. Sept. 21, 2009). This Court vacated the 2007 Final Rule, finding that: (1) inadequate regulatory mechanisms existed to ensure a healthy and adequate grizzly population post-delisting; and (2) the Service failed to consider the threat posed to the Greater Yellowstone grizzly by a decline in whitebark pine seed, a substantial source of food. *Id.* at 1126. The Ninth Circuit reversed as to the first finding but affirmed as to the second, upholding this Court’s vacatur of the final rule. *Greater Yellowstone Coalition, Inc. v. Servheen*, 665 F.3d 1015 (9th Cir. 2011).

Following remand to the agency, the Service determined that decreased availability of whitebark pine seed did not pose a substantial threat to the continued viability of the Greater Yellowstone grizzly population. Final Rule, 82 Fed. Reg. at 30,536–540. The Service went forward with delisting, publishing its Proposed Rule in 2016 and the Final Rule on June 30, 2017.

Shortly after the Final Rule was published, the D.C. Circuit decided *Humane Society v. Zinke*, 865 F.3d 585 (D.C. Cir. 2017).³ The Service recognized that *Humane Society* had direct bearing on: (1) its authority to designate and contemporaneously delist a distinct population segment; and (2) the adequacy of its discussion of the grizzly bear's historical range. In response to *Humane Society*, the Service initiated a regulatory review and called for public comments on "what impact, if any, the . . . ruling has on the [Greater Yellowstone] grizzly bear final rule and what further evaluation should be considered regarding the issues raised in *Humane Society*." Request for Comments: Endangered and Threatened Wildlife & Plants; Removing the Greater Yellowstone Ecosystem Population of Grizzly Bears from the Federal List of Endangered & Threatened Wildlife, 82 Fed. Reg. 57,698 (Dec. 7, 2017). Following a brief comment period, the Service issued its Regulatory Review, "announc[ing] [its] determination that [the] 2017 final rule . . . does not require modification." Regulatory Review: Endangered and Threatened Wildlife & Plants; Removing the Greater Yellowstone Ecosystem Population of

³ The lower district court decided *Humane Society* before publication of both the Proposed Rule and the Final Rule. *Humane Soc'y v. Jewell*, 76 F. Supp. 3d 69 (Dec. 19, 2014). The importance and relevance of the issues raised in *Humane Society* as they relate to the delisting of the Greater Yellowstone grizzly were presumably known to many of the parties in these consolidated cases, as reflected by the fact that the attorneys general for the states of Wyoming and Montana appeared as amici supporting the Service in the appeal before the D.C. Circuit.

Grizzly Bears from the Federal List of Endangered & Threatened Wildlife, 83 Fed. Reg. 18,737 (April 30, 2018) [hereinafter Regulatory Review].

Each of the Plaintiffs filed suit within months of the final delisting in June 2017, and the cases were consolidated on December 5, 2017. The parties filed motions and cross-motions for summary judgment, and this Court held a hearing on the motions on August 30, 2018. Shortly after the hearing, the Plaintiffs filed motions for a temporary restraining order and/or preliminary injunction. The Court issued a 14-day temporary restraining order enjoining the scheduled Greater Yellowstone grizzly hunts in Wyoming and Idaho on August 30, 2018. On September 13, 2018, the Court extended the temporary restraining order for another 14 days. Because it now orders that the Final Rule be vacated and the matter remanded to the Service, the Court will deny the motions for a preliminary injunction as moot.

SUMMARY JUDGMENT STANDARD

Summary judgment is appropriate when the moving party demonstrates that “there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law.” Fed. R. Civ. P. 56(a). The standard is met when the parties produce documentary evidence permitting only one conclusion. *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 251 (1986). A factual dispute

must be material to defeat summary judgment; a dispute that is irrelevant or unnecessary to the outcome cannot be considered. *Id.* at 248.

STANDARDS OF REVIEW

I. Judicial Review under the APA

Because the ESA does not contain an independent provision governing judicial review of agency action, the Court reviews the delisting determination under the APA. *City of Sausalito v. O'Neill*, 386 F.3d 1186, 1205–06 (9th Cir. 2004). Under the APA, the Court must “hold unlawful and set aside agency action, findings, and conclusions found . . . to be arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.” 5 U.S.C. § 706(2)(A).

“Review under the arbitrary and capricious standard is narrow, and [the Court] do[es] not substitute [its] judgment for that of the agency” whose decision is under review. *Earth Island Inst. v. U.S. Forest Serv.*, 697 F.3d 1010, 1013 (9th Cir. 2012) (citations and internal quotation marks omitted). “An agency’s decision can be set aside only if the agency relied on factors Congress did not intend it to consider, entirely failed to consider an important aspect of the problem, . . . offered an explanation that runs counter to the evidence before the agency[,] or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.” *Id.* (emphasis removed) (citations and internal quotation

marks omitted).

II. Statutory Requirements under the ESA

The ESA is “the most comprehensive legislation for the preservation of endangered species ever enacted by any nation.” *Tenn. Valley Auth.*, 437 U.S. at 180. Under the ESA, the Service must “identify and list species that are ‘endangered’ or ‘threatened.’” *Center for Biological Diversity v. Zinke*, 868 F.3d 1054, 1057 (9th Cir. 2017) (quoting 16 U.S.C. § 1533). A threatened species “is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range,” 16 U.S.C. § 1532(20), while an endangered species is “in danger of extinction throughout all or a significant portion of its range,” *id.* § 1532(6).

The Service must make listing and delisting determinations according to a five-factor analysis of potential threats, considering:

- (A) the present or threatened destruction, modification, or curtailment of [a species’] habitat or range;
- (B) overutilization for commercial, recreational, scientific, or educational purposes;
- (C) disease or predation;
- (D) the inadequacy of existing regulatory mechanisms; or
- (E) other natural or manmade factors affecting its continued existence.

16 U.S.C. § 1533(a)(1). The agency must make any determination “solely on the basis of the best scientific and commercial data available.” *Id.* § 1533(b)(1)(A).

DISCUSSION

The Plaintiffs raise two significant challenges to the Final Rule: (1) the Service violated the APA by failing to consider an important factor in delisting the Greater Yellowstone grizzly, which is the impact of delisting on the other remaining populations within the continental United States; and (2) the Service violated the APA by arbitrarily and capriciously applying the five-factor threats analysis demanded by the ESA. The Court considers each in turn.

I. The Service did not fulfill its duties under the ESA because it failed to analyze the threat posed by the Final Rule outside of the Greater Yellowstone Ecosystem.

In 1975, when the grizzly was first listed, the ESA allowed only for the listing of species, subspecies, and “any other group of fish or wildlife of the same species or smaller taxa in common spatial arrangement that interbreed when mature.” *Humane Soc’y*, 865 F.3d at 591 n.2 (quoting Endangered Species Act of 1973, § 3, Pub. L. No. 93-205, 87 Stat. 884, 886). Congress amended the ESA in 1978 by defining “species” to include “any distinct population segment of any species of vertebrate fish or wildlife which interbreeds when mature.” 16 U.S.C. § 1532. Because the continental grizzly bear was listed prior to the 1978 amendment establishing the distinct population segment, it was listed as the lower-48 “species,” even though the grizzlies living in the lower 48 states are not

taxonomically distinct from those found in Alaska, which have never enjoyed protected status under the ESA.

The Plaintiffs contend that the Service violated the APA's reasoned decisionmaking standard when it designated the Greater Yellowstone grizzly as a distinct population segment, carving it out of the lower-48 listing, and simultaneously delisted the segment. They argue that the ESA obligates the Service to analyze how the delisting of the Greater Yellowstone grizzly affects other continental grizzly populations, which may depend on the Greater Yellowstone grizzly for continued genetic health. The Service represents that the lower-48 designation is nothing more than a "historical artifact." (Doc. 203 at 44.) It goes on to argue that its decision to delist the Greater Yellowstone grizzly without conducting further analysis of the existing populations is to the grizzly's benefit, as the grizzly remains protected everywhere else in the continental United States, even in those regions in which grizzlies do not and never will live.

The Plaintiffs have the better argument. As the D.C. Circuit recently noted in *Humane Society*, "[t]he Service's power is to designate genuinely discrete population segments; it is not to delist an already-protected species by balkanization." 865 F.3d at 603. The Service's approach—evidenced first by this delisting and by its proposal to delist the other significant population, the

Northern Continental Divide population—does not square with the ESA as a matter of statutory interpretation or policy. Here, the Service is engaged in a process of real-time “balkanization” criticized by the D.C. Circuit in *Humane Society*:

when a species is already listed, the Service cannot review a single segment with blinders on, ignoring the continuing status of the species' remnant. The statute requires a comprehensive review of the entire listed species and its continuing status. Having started the process, the Service cannot call it quits upon finding a single distinct population segment.

Id. at 601. Moreover, it is illogical for the Service to determine that, because the populations have not interbred for many generations—making them biologically distinct from one another—it is appropriate, without further analysis, to reduce the chance that they will interbreed in the future. The ESA does not permit the Service to use the distinct population segment designation to circumvent analysis of a species' overall well-being.

A. In the Final Rule, the Service designated the Greater Yellowstone grizzly as a distinct population segment consistent with its long-standing policy.

Since at least 1996, the Service has understood the goal of recognizing distinct population segments under the ESA to be

to protect and conserve species and the ecosystems upon which they depend before large-scale decline occurs that would necessitate listing

a species or subspecies throughout its entire range. This may allow protection and recovery of declining organisms in a more timely and less costly manner, and on a smaller scale than the more costly and extensive efforts that might be needed to recover an entire species or population.

Policy Regarding the Recognition of Distinct Vertebrate Population Segments

Under the Endangered Species Act., 61 Fed. Reg. 4,722, 4,725 (Feb. 7, 1996).

The Service's interpretation is in accord with Congress's "instruct[ion]" that designation of a distinct population segment should occur "sparingly and only when the biological evidence indicates that such action is warranted." *Id.* at 4,722 (quoting S. Rep. No. 96-151, at 7 (1979)).

The Service understands the designation of a distinct population segment to demand an inquiry into three elements: (1) "discreteness . . . in relation to the remainder of the species to which it belongs"; (2) "significance . . . to the species to which it belongs"; and (3) "conservation status in relation to the Act's standards for listing (i.e., is the population segment, when treated as if it were a species, endangered or threatened?)." *Id.* at 4,725. A population segment is "discrete" *only* if it is either (a) "markedly separated from other populations of the same taxon as a consequence of physical, physiological, ecological, or behavioral factors"; or (b) "delimited by international governmental boundaries." *Id.*

Importantly, before designating a distinct population segment, "its biological

and ecological significance [must] be considered in light of Congressional guidance . . . that the authority to list [distinct population segments] be used ‘sparingly’ while encouraging the conservation of genetic diversity.” *Id.*; see S. Rep. No. 96–151, at 7 (“[Congress] expects the [Service] to use the ability to list populations sparingly and only when the biological evidence indicates that such action is warranted”). Under the Service’s interpretation of the ESA, significance is determined by the following mandatory but non-exclusive list of factors: (1) “[p]ersistence of the discrete⁴ population segment in an ecological setting unusual or unique for the taxon”; (2) “[e]vidence that loss of the discrete population segment would result in a significant gap in the range of a taxon”; (3) “[e]vidence that the discrete population segment represents the only surviving natural occurrence of a taxon that may be more abundant elsewhere as an introduced population outside its historic range”; or (4) “[e]vidence that the discrete population segment differs markedly from other populations of the species in its genetic characteristics.” 61 Fed. Reg. at 4,725.

As in the 2007 Final Rule, 72 Fed. Reg. 14,866 (March 29, 2007), the

⁴ The Service has determined that “distinctiveness” is “consistent with the concept of ‘discreteness,’” and it uses the terms “distinct” and “discrete” interchangeably. Policy Regarding the Recognition of Distinct Vertebrate Population Segments Under the Endangered Species Act, 61 Fed. Reg. 4,722, 4,722 (Feb. 7, 1996).

Service undertook a distinct population analysis in the 2017 Final Rule. It found the Greater Yellowstone population to be “discrete” because the Greater Yellowstone grizzly bear “has been physically separated from other areas where grizzly bears occur for at least 100 years” and “[g]enetic data also support the conclusion that grizzly bears from the [Greater Yellowstone Ecosystem] are separated from other grizzly bears.” Final Rule, 82 Fed. Reg. at 30,518.

As required under its 1996 Distinct Population Segment Policy, the Service went on to consider the “significance” of the Greater Yellowstone segment to the lower-48 grizzly population. First, it determined that the Greater Yellowstone grizzly “persist[s] in an ecological setting unusual or unique for the taxon” because it “consume[s] a unique combination of food sources compared to other grizzly bear populations.” *Id.* at 30,519. Second, it found that loss of the Greater Yellowstone grizzly “would represent a significant gap in the range of the taxon” because it “constitutes approximately half of the estimated number of grizzly bears remaining in the conterminous 48 states” and “represents the southernmost reach of the taxon,” extending approximately 200 miles south of the nearest population. *Id.* “[B]ecause there are several other naturally occurring populations of grizzly bears in North America,” the Service concluded that the third factor—whether the segment is the only surviving population segment within its historic range—was

inapplicable. *Id.* at 30,518. Finally, while the Service noted some documented “level of genetic differences between grizzly bears in the [Greater Yellowstone Ecosystem] and other populations in North America,” it could not “say with certainty that the [Greater Yellowstone Ecosystem] grizzly bear population’s genetics differ ‘markedly’ from other grizzly bear populations.” *Id.* at 30,519. Thus, the Service determined the fourth and final factor to be inconclusive.

B. The Service violated the ESA under the standards set forth in the APA by delisting the Greater Yellowstone segment without analyzing the impact of delisting on other continental grizzly populations.

Following publication of the Final Rule, the D.C. Circuit Court of Appeals decided *Humane Society v. Zinke*, which involved a similar issue. As relevant to this discussion, the D.C. Circuit reviewed a final rule creating and simultaneously delisting a new distinct population segment, the Western Great Lakes gray wolf segment. *Id.* at 592. Applying general administrative law principles, the court held that the Service has the authority to create and delist a segment in a single action. *Id.* at 595–600. However, it went on to hold that the Service acted arbitrarily and capriciously when it failed to consider the effect of delisting on other members of the species. *Id.* at 601–03.

Here, unlike in *Humane Society*, the Plaintiffs do not challenge the Service’s power to interpret the ESA as allowing for contemporaneous designation of a

distinct population segment and delisting of the same segment. Thus, for purposes of this Order, the Court assumes that the Service has the legal authority to create and delist a segment in one fell swoop. Rather, the Court's inquiry focuses on whether it must vacate the Final Rule because the Service did not consider whether delisting the Greater Yellowstone grizzly bear would impact other grizzlies living in the continental United States.

The Service concedes that it did not analyze the impact of delisting on grizzly bear populations outside the Greater Yellowstone Ecosystem, rationalizing this decision on the fact that the remainder of the lower-48 designation is still listed. The Service and the Intervenor-Defendants raise several arguments against application of *Humane Society*, contending that: (1) the Plaintiffs' arguments grounded in *Humane Society* are moot; (2) *Humane Society* was wrongly decided, and the Court should refuse to apply its logic; and (3) *Humane Society* is distinguishable. Thus, provided the Plaintiffs' claims are justiciable, if *Humane Society* is both analogous and correctly decided, the Court must "hold unlawful and set aside" the Final Rule as arbitrary and capricious. 5 U.S.C. § 706(2)(A).

1. The Court has subject matter jurisdiction over the Plaintiffs' claims.

As a threshold matter, the Service contends that the Court lacks jurisdiction

over any claim arising from the alleged inconsistency of the Final Rule with the D.C. Circuit's recent decision in *Humane Society v. Zinke*. The Service argues that these claims are mooted by its Regulatory Review of the Final Rule, issued following a comment period on April 30, 2018, after *Humane Society* was decided and the Plaintiffs initially filed suit. In its Regulatory Review and in response to *Humane Society*, the Service addressed in "greater detail" the "status" of the Greater Yellowstone segment and the rest of the lower-48 grizzly bear.⁵

"The doctrine of mootness, which is embedded in Article III's case or controversy requirement, requires that an actual, ongoing controversy exist at all stages of federal court proceedings." *Pitts v. Terrible Herbst, Inc.*, 653 F.3d 1081, 1086 (9th Cir. 2011). "A claim is moot if it has lost its character as a present, live controversy." *Am. Rivers v. Nat'l Marine Fisheries Serv.*, 126 F.3d 1118, 1123 (9th Cir. 1997). Thus, "[i]f an event occurs that prevents the court from granting effective relief, the claim is moot and must be dismissed." *Id.*

The Regulatory Review did not moot the Plaintiffs' claims, and the Court

⁵ The Service also took advantage of the Regulatory Review to provide a fuller discussion of historical range, an issue raised in both *Humane Society* and this case. The Court is skeptical of this approach by the Service to backfill and provide analysis of an issue that had not been thoroughly analyzed before adopting the final delisting rule. Arguably, this constitutes an impermissible post-hoc rationalization. However, because the Court does not reach the Plaintiffs' historical range argument in this Order, no further discussion on this issue is required.

has jurisdiction in this case. Indeed, as the Service writes, “To be clear, we are not arguing that Plaintiffs’ cases should be dismissed as moot, but rather only the claims alleging that [the Service] failed to address the D.C. Circuit’s opinion in *Humane Society*.” (Doc. 203 at 25.) However, the Plaintiffs have not argued that the Service “failed to address” *Humane Society*. Rather, they cite to *Humane Society* as legal support for their argument that the Final Rule is arbitrary and capricious. If the Plaintiffs had argued that the Final Rule is unlawful solely because the Service did not consider a judicial opinion, that argument would fail because the Service is not required to analyze the law but only to comply with it.

Moreover, the Regulatory Review is not a replacement for the Final Rule but only a summary of the Final Rule and a discussion of its sufficiency “in light of the *Humane Society* opinion.” Regulatory Review, 83 Fed. Reg. at 18,742. Accordingly, there is no “supersed[ing]” agency action that moots the Plaintiffs’ claims. *Am. Rivers*, 126 F.3d at 1124. Even if the Regulatory Review is not a post-hoc justification for the Final Rule, as the Plaintiffs contend, it has no bearing on justiciability.

2. *Humane Society v. Zinke* is not distinguishable.

When the Service delisted the Western Great Lakes gray wolf, “it left the remnant of [the] already-statutorily-protected [gray wolf species] in legal limbo

without any determination that the gray wolves in the continental United States outside of the Western Great Lakes segment were themselves a species, subspecies, or segment that could continue to be protected under the Endangered Species Act.” *Humane Soc’y*, 865 F.3d at 602. The Service and the Intervenor-Defendants argue that *Humane Society* is distinguishable because the Service expressly determined that the lower-48 grizzly remains listed outside the Greater Yellowstone Ecosystem. Final Rule, 82 Fed. Reg. at 30,623 (“When this rule becomes effective, all areas in the lower 48 States outside the [Greater Yellowstone Ecosystem segment] boundary will remain protected as threatened under the Act.”); Regulatory Review, 83 Fed. Reg. at 18,739 (“The 1975 listing remains valid.”).

The only potentially significant difference between the Greater Yellowstone grizzly delisting and the Western Great Lakes gray wolf delisting is that the Service affirmatively stated that the lower-48 grizzly would remain listed outside the newly designated population segment. Compare 82 Fed. Reg. at 30,623, with *Humane Soc’y*, 865 F.3d at 602 (“When the Service attempted to carve the Western Great Lakes segment out of [the endangered gray wolf population], it left the remnant of that already-statutorily-protected group in legal limbo without any determination that the [remaining gray wolves] were themselves a species,

subspecies, or segment that could continue to be protected under the [ESA].”).

However, the Service’s express statement that the lower-48 grizzly remains listed at the time of the Greater Yellowstone grizzly delisting is not the end of the inquiry. Indeed, it is contradicted by the Service’s position that “the management and potential status of other grizzly bear populations is outside the scope of [the] final rule.” Final Rule, 82 Fed. Reg. at 30,552.

What is more, even as the Service asserted continuing protection for the lower-48 grizzly, it noted “that the population in the Northern Continental Divide Ecosystem may be eligible for delisting in the near future.” Regulatory Review, 83 Fed. Reg. at 18,739; *see also* Final Rule, 82 Fed. Reg. at 30,552 (“The [Northern Continental Divide] grizzly bear population is likely biologically recovered . . .”). In fact, the Service has initiated the delisting process in the Northern Continental Divide Ecosystem, home to the only other substantial grizzly population in the lower-48. *See* Department of the Interior, Notice, Endangered and Threatened Wildlife and Plants; Draft Conservation Strategy for the Northern Continental Divide Ecosystem Grizzly Bear, 78 Fed. Reg. 26,064 (May 3, 2013). If the Northern Continental Divide and Greater Yellowstone populations are both successfully delisted, the lower-48 grizzly listing will cover only two areas with fewer than 100 grizzlies, one area where grizzlies have not been affirmatively

located in over twenty years, and a fourth area where grizzlies have not been seen since at least 1975. Final Rule, 82 Fed. Reg. at 30,508–09. As the Service itself admits, “it would be difficult to justify a distinct population segment in an area where bears . . . have not been located for generations.” (Doc. 203 at 35.)

Given the context surrounding the Greater Yellowstone segment delisting, the Service’s argument—that the Court should, as it did, look no further than to note the continued listing of the lower-48 grizzly post-delisting of the Greater Yellowstone grizzly—is simplistic at best and disingenuous at worst. Again, the Service cannot abuse its power to “delist an already-protected species by balkanization.” *Humane Soc’y*, 865 F.3d at 603. *Humane Society* is distinguishable only on a formalistic basis; here, as there, the cleaving of a newly designated segment from an existing listing demonstrates the Service’s failure to grapple with the functional and legal impact of delisting on the listed entity.

3. The Service acted arbitrarily and capriciously by failing to consider the impact of delisting on both the Greater Yellowstone grizzly population and other members of the lower-48 grizzly population.

The Service does not have unbridled discretion to draw boundaries around every potentially healthy population of a listed species without considering how that boundary will affect the members of the species on either side of it. The

Service's piecemeal approach, isolating and delisting populations without questioning the effect on other populations, presents an irresolvable conflict with ESA's "policy of institutionalized caution." *Ariz. Cattle Growers' Ass'n v. Salazar*, 606 F.3d 1160, 1167 (9th Cir. 2011).

Under the arbitrary and capricious standard, the Court may not vacate an agency's decision unless the agency "relied on factors which Congress had not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise." *State Farm*, 463 U.S. at 43. Here, the issue is whether the Service "failed to consider an important aspect of the problem" when it determined that the ESA allows it to delist a newly created distinct population segment without examining the relationship between the segment and the rest of the species.

"Whether an agency has overlooked 'an important aspect of the problem' . . . turns on what a relevant substantive statute makes 'important.'" *Or. Natural Res. Council v. Thomas*, 92 F.3d 792, 798 (9th Cir. 1996). As relevant here, "the purposes of [the ESA] are to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved[] [and] to

provide a program for the conservation of such endangered species and threatened species.” 16 U.S.C. § 1531(b). Congress enacted the ESA in recognition of endangered and threatened species’ “esthetic, ecological, educational, historical, recreational, and scientific value to the Nation and its people.” 16 U.S.C. § 1531(a)(3).

Broadly speaking, because extinction is irreversible, the ESA’s policy is one of “institutionalized caution.” *Tenn. Valley Auth.*, 437 U.S. at 194. Federal agencies may not ignore potential threats and instead choose to “take a full-speed ahead, damn-the-torpedoes approach to delisting.” *Greater Yellowstone*, 665 F.3d at 1030. Rather, under the ESA, agencies must “insure that any action authorized, funded, or carried out by such agency . . . is not likely to jeopardize the continued existence of” a listed species. 16 U.S.C. § 1536(a)(2).

More specifically, pursuant to § 4(c) of the ESA, 16 U.S.C. § 1533(c), the Service—which acts through authority delegated by the Secretary of the Interior—must maintain lists of all endangered and threatened species. “[F]rom time to time,” the Service must “revise each list . . . to reflect recent determinations, designations, and revisions made in accordance with [§§ 4(a) and (b)].” Similarly, the Service must conduct a five-year review of all listed species and determine, again in accordance with §§ 4(a) and (b), whether to revise the listing status of the

reviewed species. 16 U.S.C. § 1533(c)(2). That review must cover the “species included in a list.” § 1533(c)(2)(A). In other words, the Service has an obligation to consider the *already listed* species. *Id.*; *see* § 1533(c)(1), (b)(1)(A) (The Service shall “make [its] determinations . . . after conducting a review of the status of the [listed] species.”); *Humane Soc’y*, 865 F.3d at 601.

Section 4(a), in turn, demands that the Secretary consider five potential threats when it reviews a listed entity’s classification: (1) “the present or threatened destruction, modification, or curtailment of its habitat or range”; (2) “overutilization for commercial, recreational, scientific, or educational purposes”; (3) “disease or predation”; (4) “the inadequacy of existing regulatory mechanisms”; and (5) “other natural or manmade factors affecting its continued existence.” 16 U.S.C. § 1533(a)(1). The final decision must be made “solely on the basis of the best scientific and commercial data available.” 16 U.S.C. § 1533(b)(1).

As the D.C. Circuit wrote in *Humane Society*, considering the statutory design of ESA § 4, 16 U.S.C. § 1533, “[t]he Endangered Species Act’s text requires the Service, when reviewing and redetermining the status of a species, to look at the whole picture of the listed species, not just a segment of it.” 865 F.3d at 601. Because § 4(c) incorporates the § 4(a) threats analysis, the Service’s

review must be comprehensive of all identified and reasonably identifiable threats, and it must comport with the ESA's "best available science standard." *San Luis & Delta-Mendota Water Authority v. Locke*, 776 F.3d 971, 995 (9th Cir. 2014).

Again, "when a species is already listed, the Service cannot review a single segment with blinders on, ignoring the continuing status of the species' remnant. The [ESA] requires a comprehensive review of the entire listed species and its continuing status." *Humane Soc'y*, 865 F.3d at 601. When it delisted the Greater Yellowstone population, the Service did not undertake the comprehensive review mandated by the ESA. Instead, it simply pointed to the continued listing of the continental grizzly as proof that the delisting would do no harm to members of the species outside the Greater Yellowstone Ecosystem. The Service then published its Regulatory Review, after litigation was initiated, in a last-ditch attempt to prove to the Court that its review was sufficient. The Court cannot agree with the Service that the Regulatory Review cures the inadequacy of the Final Rule.

In this instance, the Service must consider how the delisting affects other members of the listed entity, the lower-48 grizzly bear, because decreased protections in the Greater Yellowstone Ecosystem necessarily translate to decreased chances for interbreeding. That the Greater Yellowstone grizzly delisting may influence the other continental populations should come as no

surprise to the Service; indeed, the isolation and lack of connectivity between grizzly populations was a recognized threat at the time of the original listing. 40 Fed. Reg. 31,724.

The Service argues that the Court cannot follow the approach laid out in *Humane Society* because it is inconsistent with the Ninth Circuit's opinion in *Coos County Board of County Commissioners v. Kempthorne*, 531 F.3d 792 (9th Cir. 2008). The Service's reliance on *Coos County* is misplaced. It is true that in that case, the Ninth Circuit held that aspects of ESA § 4(c) cannot be reconciled with §§ 4(a) and (b). However, its analysis has no bearing on the question at hand, as the Court's focus was solely on whether § 4(c) incorporates the statutory deadlines outlined in § 4(b), which governs the process to be followed when a citizen petition is filed. *Id.* at 803–08. In this instance, however, *Coos County* supports the Plaintiffs' position, as there the Court noted that § 4(c) does incorporate those provisions that “generally direct how determinations regarding listings are to be made and implemented,” including the requirements pertinent to the Service's review of “the status of the species.” *Id.* at 806–07.

In sum, the Service arbitrarily and capriciously determined that it need not analyze the impact of delisting on grizzlies living outside the Greater Yellowstone Ecosystem. Section 4 of the ESA demands that the Service consider the legal and

functional effect of delisting a newly designated population segment on the remaining members of a listed entity. To conclude otherwise would be to ignore the ESA's policy of "institutionalized caution," *Tenn. Valley Auth.*, 437 U.S. at 194, which is necessary to promote the ESA's purpose of conservation, 16 U.S.C. § 1531(a)(3), (b).

II. The Service's failure to require a recalibration provision in the Conservation Strategy is arbitrary and capricious.

The Plaintiffs argue that the Service acted arbitrarily and capriciously in its ESA threats analysis because existing regulatory mechanisms are inadequate to ensure the Greater Yellowstone grizzly's survival. *See* 16 U.S.C. § 1533(a)(1)(D). Many of the Plaintiffs' arguments are foreclosed by the Ninth Circuit's opinion in *Greater Yellowstone*, and the Court cannot—as the Plaintiffs request—second-guess the states' willingness and ability to manage a delisted grizzly population.

However, one issue is distinguishable from those presented in *Greater Yellowstone*, and it is compelling. Between the draft and final versions of the Conservation Strategy, the Service removed its commitment to recalibration—the mechanism by which estimates generated by a new population estimator, if adopted, would be brought in line with those generated by the current estimator, the Chao2 model. This modification was made not on the basis of the best

available science, as demanded by the ESA, but rather as a concession to the states in order to reach a deal. Even under the deferential standard demanded by the ESA, the Court cannot conclude that the failure to address recalibration is anything other than a failure of reasoned decisionmaking.

A. The Service did not act arbitrarily and capriciously in relying on the states' general promises to manage mortality.

The Plaintiffs contend that existing regulatory mechanisms are inadequate to ensure that the states will effectively manage mortality among Greater Yellowstone grizzlies. In *Greater Yellowstone*, this Court considered a similar challenge to the 2007 delisting. The plaintiff in that case argued that “existing regulatory mechanisms” were inadequate, “demonstrat[ing] that the Yellowstone grizzly bear [distinct population segment] should not be removed from the threatened species list.” *Greater Yellowstone*, 672 F. Supp. 2d at 1113. This Court agreed with the plaintiff, determining that “the Conservation Strategy, the centerpiece of the regulatory mechanisms relied on by the Service, cannot actually regulate anything.” *Id.* at 1116.

Although this Court agreed with the plaintiff, the Ninth Circuit did not. Over a dissent that argued that the Service relied not on regulatory mechanisms but on “[m]ere citation to potentially applicable statutes and regulations without

analysis,” *Greater Yellowstone*, 665 F.3d at 1036 (Thomas, J., dissenting), the majority held that it was enough that “[t]he Rule . . . cites to a wide range of other rules, regulations, and laws, both state and federal, which *could* facilitate the protection of the grizzly bear and the implementation of the Strategy,” *id.* at 1031–32 (emphasis added).

The Plaintiffs argue that the current challenge is distinguishable from that presented in *Greater Yellowstone* because the Court relied upon the federal government’s retained control over the Greater Yellowstone grizzly in that case. *See id.* at 1032 (“The National Forest Plans and National Park Compendia make legally binding the Strategy’s standards on 98% of the [primary conservation area] and are buffered by the legal protections afforded by the Wilderness Act on a significant portion of grizzly habitat outside the PCA.”). Here, while the Plaintiffs concede that the Conservation Strategy is largely the same as that considered in *Greater Yellowstone*, they contend that their challenge is legally distinguishable because the Ninth Circuit did not consider the fact that the states now have exclusive or nearly exclusive control over discretionary mortality. (*See Hrg. Trans.* 14–17, 29–31.)

The Court disagrees that the states’ control over discretionary mortality presents a legally distinguishable issue from that presented in *Greater Yellowstone*.

The Plaintiffs' distinguishing principle appears to be that, while the Court must trust the federal government to protect the grizzly bear pursuant to *Greater Yellowstone*, it should not afford the same level of trust to the states. The Plaintiffs have not explained why the Court can second-guess the states' but not the federal government's intentions. The Service concluded that, given the states' decades-long commitment to "funding and performing the majority of grizzly bear recovery, management, monitoring, and enforcement efforts within their jurisdictions for decades," "[t]here is not a reasonable basis to believe the States will not adequately fund grizzly bear management of a delisted population." Final Rule, 82 Fed. Reg. at 30,603.

Following the Ninth Circuit's decision in *Greater Yellowstone*, the Court cannot find for the Plaintiffs on the basis that the Service erred in relying on state regulatory mechanisms to manage mortality among Greater Yellowstone grizzlies.

B. The Service acted arbitrarily and capriciously by determining that the final Conservation Strategy need not provide for a recalibration mechanism.

On one point, the Plaintiffs' challenges regarding regulatory mechanisms are distinguishable from those presented in *Greater Yellowstone*. As to the failure to include a recalibration provision, the Service could not "reasonably conclude that adequate regulatory mechanisms exist to protect the Yellowstone grizzly bear."

Greater Yellowstone, 665 F.3d at 1032.

Under the ESA, the Service must make listing and delisting determinations in consideration of “the inadequacy of existing regulatory mechanisms,” and it must do so “solely on the basis of the best scientific and commercial data.” 16 U.S.C. § 1533(a)(1)(D), (b)(1)(A). Here, the Service recognized that recalibration was a matter of significant concern. However, rather than rationally consider and apply the best available science, as demanded by the APA and the ESA, it made a concession to the states to secure their participation in the Conservation Strategy.

As the Service explains, “‘recalibration’ refers to calibrating a new model’s estimates for a given year (*e.g.*, 1000 bears in 2020) to the Chao2 population estimates generated for the 2002–2014 time period (average of 674 bears).” (Doc. 203 at 91 n.17.) The Plaintiffs raise the concern that the states are free to adopt a new model, in which case the baseline population estimates upon which the Final Rule depend would no longer be relevant. In other words, if a new model estimates 1000 bears where Chao2 found 700, the states will be able to treat the jump in population as they would treat it on paper—as if 300 new individuals had moved into the Greater Yellowstone Ecosystem.

In the Final Rule, the Service represented that the Chao2 model may not remain the best available science but that it “will continue to be the method [for

estimating the population] until a new population estimator is approved.” The Service argues that the Plaintiffs fail to recognize (1) that the Service and the states committed to choosing an estimator based on the best available science well into the future and (2) that the Interagency Study Team must agree to adopting a new estimator. However, the danger is not that a better estimator will become available and the state will choose to adopt it. The danger is that when science and technology progress, the better estimator will be indifferent to the estimates upon which the Final Rule stands.

The Service was aware that recalibration was a matter of significant concern; as staff members wrote, settling upon a method of recalibration was a “key commitment,” and failure to do so would be a “show-stopper,” likely to result in a “biologically and legally indefensible” delisting determination.

FWS_Emails_008087, 008546–47, 008455-56. A provision need not be overly detailed; it would be enough “to just state clearly if the population estimator is changed [the agencies] will recalibrate.” FWS_Emails_008546–47. In response to political pressure from the states, the Service dropped the provision despite its recognition of its importance. *See* FWS_Emails_007744, 063366, 063383. As the Service’s former grizzly bear coordinator wrote at the time, the Service’s willingness to negotiate away this important provision constitutes “a violation of

the mandate of the ESA that the Service implement adequate regulatory mechanisms prior to delisting. There cannot be a vote by other agencies to determine if the Service follows the ESA” FWS_Emails_063377.

The Service argues that Plaintiffs’ arguments fail because: “Chao2 applies for the foreseeable future, experts cannot ‘recalibrate’ numbers based on an estimation method that has not been identified, and appropriate safeguards exist to ensure that any future changes accord with the science and grizzly bear recovery.” (Doc. 203 at 103.). Although the Court agrees as to the first point—that the Conservation Strategy anticipates continued use of the Chao2 estimator for an unidentified period of time—it disagrees that the Service’s arguments save the failure to address recalibration in the Conservation Strategy. First, the Final Rule is equivocal about the commitment to Chao2, which has recognized limitations. 82 Fed. Reg. at 30513. Second, while it is likely true that the mathematical formula for recalibration cannot be determined until a new estimator is selected, that has no bearing on the parties’ ability to address recalibration as a general matter—even if it is only to state a commitment to recalibration. And finally, the Court does not question the commitment of the Service and each of the states to continued grizzly recovery; however, the general good intentions of the parties do not override the ESA’s mandate that decisions be made in accordance with the best

available science.

Nor is the Court convinced that the risk posed by the potential adoption of a new estimator is too speculative or distant to require discussion within the Conservation Strategy. While it is true that the Court's review under the ESA cannot be speculative, *Bennett v. Spear*, 520 U.S. 154, 176 (1997), here the risk presented by recalibration is beyond mere speculation. As the Service continually asserts throughout its brief and at the hearing held by the Court, the Chao2 estimator is "highly conservative" and likely to underestimate population size. (Doc. 203 at 83–84.) Given that Chao2 is known to create low estimates, it stands to reason that a more accurate model would generate a higher population estimate.

Further, the Service was well aware of the threat presented by the parties' failure to prospectively dispose of recalibration. Rather than maintain heightened protections in the face of a recognized threat to the health of the Greater Yellowstone grizzly, the Service accepted a "compromise" that was in effect a capitulation. FWS_Emails_007721–22, 63366. Because it was "the strongest agreement the Service can get," the parties agreed that they would ignore recalibration and delete the "best available science" requirement for changing the estimator. *Id.* In return, the states agreed to continue to use Chao2 "for the foreseeable future." *Id.*

The Service contends that the Plaintiffs misconstrue the record, which shows only that there was a healthy, robust debate about recalibration. (Doc. 203 at 59, 101.) However, the Service points to nothing that suggests that it considered the best available science when it dropped the recalibration commitment from the final Conservation Strategy. Nor does it point to any record evidence suggesting that concerns about recalibration were overstated. Indeed, all the evidence cited by the parties supports the Plaintiffs' position that (1) the Service and other scientists viewed a recalibration provision as essential; and (2) the Service chose to forego such a provision in order to get a deal with the states.

The failure to address recalibration is irreconcilable with the ESA and the APA. Of course, the Court cannot second-guess reasoned decisionmaking and must defer to the agency's designation and interpretation of the best available science. However, here all available evidence demonstrates that the Service made its decision not on the basis of science or the law but solely in reaction to the states' hardline position on recalibration. The Service cannot negotiate away its obligation to make decisions "solely on the basis of the best available science." 16 U.S.C. § 1533(b)(1)(A).

III. The Service's determination that it need not provide for either natural connectivity or translocation is contrary to the best available science.

The Plaintiffs challenge the Service's delisting decision relating to its analysis of the Greater Yellowstone grizzly's genetic health. The Service must consider the "natural or manmade factors affecting [the Greater Yellowstone grizzly's] continued existence." 16 U.S.C. § 1533(b)(1)(A). The Service appropriately recognized that the population's genetic health is a significant factor demanding consideration under the ESA threats analysis. However, it misread the scientific studies it relied upon, failing to recognize that all evidence suggests that the long-term viability of the Greater Yellowstone grizzly is far less certain absent new genetic material.

As the Service noted in the Final Rule, "[t]he isolated nature of the [Greater Yellowstone] grizzly bear was identified as a potential threat when listing occurred in 1975." 82 Fed. Reg. at 30,535. Without an adequate gene pool, the Greater Yellowstone grizzly bear will be at increased risk of endangerment. 82 Fed. Reg. at 30,535–36. As discussed above, the Service refused to analyze the issue of connectivity between the Greater Yellowstone grizzly and other populations, determining that it could isolate and delist the Greater Yellowstone grizzly because the other populations remained listed. Thus, for the Rule to survive scrutiny under the APA and the ESA, the Service must have reasonably considered that the

Greater Yellowstone population is sufficiently diverse to support future generations.

The Court cannot substitute its judgment for that of the Service, and it must reject the Plaintiffs' challenge to the degree that the Plaintiffs seek to substitute their interpretation of the scientific data for that of the Service. *See Alaska Oil & Gas Ass'n v. Pritzker*, 840 F.3d 671, 683–84 (9th Cir. 2016) (“[A]ll the ESA requires” is that “[the agency] demonstrated that it ‘considered the relevant factors and articulated a rational connection between the facts found and the choices made.’” (quoting *Nw. Ecosys. All. v. U.S. Fish & Wildlife Serv.*, 475 F.3d 1136, 1140 (9th Cir. 2007))).

Regarding the Greater Yellowstone grizzly's long-term genetic health, the Plaintiffs argue that, although the Service relied on the best available science, it did not interpret that science rationally. While the APA sets a high bar, the Court determines that the Plaintiffs have met it. The Service failed to logically support its conclusion that the current Greater Yellowstone population is not threatened by its isolation.

“Effective population size is a metric used by geneticists to distinguish between total population size and the actual number of individuals available to reproduce at any given time.” 82 Fed. Reg. at 30,535. The total estimated

number of Greater Yellowstone grizzly bears—approximately 700—is not an estimate of the number of bears contributing to the gene pool. Instead, scientists must extrapolate from that total an estimate of the reproducing population. Because of the need for genetic diversity, “the 2007 Conservation Strategy recommended that if no movement or successful genetic interchange was detected by 2020, grizzly bears from the [Northern Continental Divide Ecosystem] would be translocated into the [Greater Yellowstone Ecosystem] grizzly bear population to achieve the goal of two effective migrants every 10 years (i.e., one generation) to maintain current levels of genetic diversity.” 82 Fed. Reg. at 30,536.

However, the Service did not renew this commitment in the 2017 delisting. It did

not consider genetic concerns to be a threat for the following reasons: We have an effective population size more than four times that recommended by the best available science; we know levels of genetic diversity have not declined in the last century; we know current levels of genetic diversity are sufficient to support healthy reproduction and survival; and we know that genetic contribution from individual bears outside of the [Greater Yellowstone Ecosystem] will not be necessary for the next several decades.

Id. at 30,544.

To support these propositions, the Service relied primarily on two different studies addressing the Greater Yellowstone grizzly’s genetic health. The first, Miller and Waits (2003), was also integral to the 2007 Rule. That study proposed

a minimum effective population size of 100 grizzly bears for the Greater Yellowstone Ecosystem and estimated that a total population of 400 individuals would support that minimum effective population. *Id.* at 30,535. When it considered the 2007 Rule in *Greater Yellowstone*, this Court agreed that the Service did not act arbitrarily and capriciously in relying on the Miller and Waits study to determine that “the Yellowstone grizzly population can avoid negative genetic consequences in the near future” by maintaining a total effective population of 100 individuals. *Greater Yellowstone*, 672 F. Supp. 2d at 1120–21. However, the Court also noted that “[i]t appears extremely unlikely that natural connectivity will occur in the foreseeable future,” *id.* at 1121 n.6, and thus it relied upon the agencies’ commitment to translocate grizzlies as necessary to maintain genetic diversity, *id.* at 1120–21.

In the 2017 Conservation Strategy, the Service continued to rely on the Miller and Waits study for the determination that “[f]or short-term fitness (i.e., evolutionary response), the effective population size of the [Greater Yellowstone Ecosystem] grizzly bear population should remain above 100 bears.” 82 Fed. Reg. at 30535 (citation omitted). It also considered a more recent study, Kamath et al. (2015), for the proposition that the ratio between effective and total population is significantly higher than that estimated in the Miller and Waits study.

Id. at 30536. Considering both studies together, the Service concluded that the “effective population size . . . of the [Greater Yellowstone Ecosystem] population has increased from 102 . . . in 1982, to 469 . . . in 2010. The current effective population is more than four times the minimum effective population size suggested in [the Miller and Waits study].” *Id.* Relying on these numbers, the Service concluded that it no longer needed a concrete plan for translocation and could instead rely on Montana’s “indicat[ion] they will manage discretionary mortality [in the area bridging the Greater Yellowstone and Northern Continental populations] in order to retain the opportunity for natural movements of bears between ecosystems.” *Id.* Under the Final Rule, then, “[t]ranslocation of bears . . . will be a last resort and will be implemented only if there are . . . genetic measures that indicate a decrease in genetic diversity.” *Id.*

The Service illogically cobbled together two studies to reach its determination that the Greater Yellowstone grizzly population is sufficiently diverse at this time; in doing so, it ignored the clear concerns expressed by the studies’ authors about long-term viability of an isolated grizzly population. Miller and Waits noted in 2003 that the “genetic consequences of inbreeding and isolation are likely to transpire over longer periods of time (decades and centuries).”

FWS_Lit_009423. Similarly, Kamath determined that the Greater Yellowstone

grizzly does not currently meet the “long-term viable population criterion” but “may eventually” get there. FWS_Lit_005979. Kamath went on to recommend measures to ensure cross-breeding between ecosystems, “particularly given the unpredictability of future climate and habitat changes.” *Id.* Neither study gives a threshold minimum effective or total population, although the Kamath study does support, as a general matter, that the threat of inbreeding in the Greater Yellowstone Ecosystem is not as dire as Miller and Waits suggested.

Moreover, the studies cited by the Service do not squarely support the assertions for which they are cited. Miller and Waits stated that it “is not known” what is an effective population size to prevent the “short term effects” of inbreeding; it only determined that the *current* (circa 2003) effective population size is likely to be near or greater than 100, on the basis of its estimate that 25 percent of the total population, which it estimated to comprise 400 individuals, constitute the effective population. FWS_Lit_009423; *see also* Pub_Cmt_004192. Thus, it does not support the Service’s reading that 100 individuals constitute “the minimum effective population size suggested in the literature.” (Doc. 203 at 110.)

The Kamath study is similarly limited. It only states that effective population size may equal 42 to 66 percent of the total population, rather than the approximately 25 percent applied in Miller and Waits. FWS-Lit_005979. In the

Final Rule, the Service applied the high end of the range listed in Kamath—66 percent—to determine that the Greater Yellowstone grizzly’s current effective population size is 469. 82 Fed. Reg. 30,536. The Service offers no data supporting its conclusion that this number is sufficiently high that no intervention should occur unless scientists prove that the Greater Yellowstone grizzly’s genetic health has already shown signs of compromise.

Indeed, the Service admits these limitations, stating in the Final Rule that the current estimated effective population size is “adequate to maintain genetic health in this population” but that natural connectivity or translocation “would maintain or enhance this level of genetic diversity and, therefore, ensure genetic health in the long term . . . and benefit the [population’s] long-term persistence” *Id.* Despite its recognition that continued isolation poses a threat to the Yellowstone grizzly, there is no regulatory mechanism in place to address the threat, only Montana’s commitment to “manage discretionary mortality” between populations in order to “retain the opportunity for natural movements of bears between ecosystems.” *Id.* Of course, those natural movements have not yet occurred. Thus, it is illogical to conclude that the same opportunities for connectivity will produce different results in the future, particularly if one or both populations are delisted.

In short, the Service has failed to demonstrate that genetic diversity within the Greater Yellowstone Ecosystem, long-recognized as a threat to the Greater Yellowstone grizzly's continued survival, has become a non-issue. Although the Kamath study suggests that the situation is not as dire as was once predicted, it does not support the Service's conclusion that translocation should be implemented only after the Greater Yellowstone grizzly's genetic health is demonstrably weakened. The Service's determination is arbitrary and capricious because it is both illogical and inconsistent with the cautious approach demanded by the ESA.

CONCLUSION

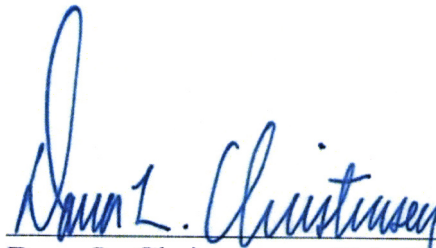
The Service failed to make a reasoned decision, as required by the APA, when it delisted the Greater Yellowstone grizzly. By refusing to analyze the legal and functional impact of delisting on other continental grizzly populations, the Service entirely failed to consider an issue of extreme importance. Moreover, the Service's analysis of the threats faced by the Greater Yellowstone grizzly segment was arbitrary and capricious.

Accordingly, IT IS ORDERED that:

- (1) the Plaintiffs' motions for partial summary judgment and motions for summary judgment (Docs. 75, 89, 182, 185, 188, 189, 191, and 193) are GRANTED;

- (2) the Defendants' and Intervenor-Defendants' cross-motions for summary judgment (Docs. 202, 208, 210, 212, 213, 217, and 219) are DENIED;
- (3) the Final Rule delisting the Greater Yellowstone Ecosystem grizzly bear is VACATED and REMANDED; and
- (4) The Plaintiffs' motions for a preliminary injunction (Docs. 251 and 252) are DENIED as moot.
- (5) Plaintiff Aland's motion to supplement the final administrative record and allow limited discovery (Doc. 171) is DENIED as moot.

DATED this 24th day of September, 2018.



Dana L. Christensen, Chief District Judge
United States District Court